

IN THE CLAIMS:

1. **(Currently Amended)** A rotary atomizer for coating work pieces comprising a rotating bell-shaped plate shaft of a bell-shaped plate extending along an axis of rotation for discharging a spray stream of a coating agent, at least one steering air outlet for discharging steering air for shaping the spray stream, a bearing unit arranged in a housing of said rotary atomizer for a turbine with a turbine wheel for driving said bell-shaped plate, ~~[[and]]~~ at least one steering air line arranged in said housing opening into said steering air outlet for supplying steering air, wherein steering air line passes ~~axially~~ and through an air space and a second steering air outlet wherein said steering air outlets create two levels of steering air to said bell-shaped plate for shaping the spray stream.

2. **(Original)** A rotary atomizer according to Claim 1, wherein said bearing unit comprises at least one steering air inlet in its surface shell and at least one steering air outlet in its end surface facing said bell-shaped plate, said steering air inlet and said steering air outlet of said bearing unit being fluidly connected by a hole in said bearing unit.

3. **(Currently Amended)** A rotary atomizer according to Claim 2, wherein said hole in the bearing unit runs at an acute angle to ~~[[an]]~~ said axis of rotation of said bell-shaped plate.

4. **(Original)** A rotary atomizer according to Claim 2, wherein said hole in said bearing unit on said side facing said bell-shaped plate extends parallel to said axis of rotation and comprises a needle hole extending from said surface shell of said bearing unit.

5. **(Original)** A rotary atomizer according to Claim 1, wherein said steering air line runs at a radial distance from said axis of rotation of said bell-shaped plate, said distance being greater than an outer diameter of said turbine wheel and smaller than an outer diameter of said bearing unit.

6. **(Original)** A rotary atomizer according to Claim 1, wherein said steering air line runs essentially without bends at least over a large part of its length.

7. **(Original)** A rotary atomizer according to Claim 1, wherein said steering air line extends essentially parallel to said axis of rotation of said bell-shaped plate at least over a large part of its length.

8. **(Original)** A rotary atomizer according to Claim 1, wherein said steering air line comprises an essentially constant cross-sectional area at least over a large part of its length.

9. **(Original)** A rotary atomizer according to Claim 1, wherein said steering air line comprises an essentially constant cross-sectional shape at least over a large part of its length.

10. **(Original)** A rotary atomizer according to Claim 1, wherein said steering air line comprises an obstacle-free interior shape at least over a large part of its length.

11. **(Cancelled)**

12. **(Currently Amended)** A rotary atomizer according to Claim ~~[[11]]~~ 1, where said at least two steering air outlets are arranged at a different radial distance from said axis of rotation of said bell-shaped plate.

13. **(Original)** A rotary atomizer according to Claim 12, wherein said at least two steering air lines comprise separate steering air lines for guiding the steering air to different of said steering air outlets.

14. **(Original)** A rotary atomizer according to Claim 13, comprising a first steering air line is spatially separated from said housing and a second steering air line arranged toward contacting said housing.

15. **(Cancelled)**

16. **(Cancelled)**

17. **(New)** A turbine for use with a rotary atomizer for coating work pieces comprising;

a housing defining an axis of rotation,

a bell-shaped plate rotatable relative to said housing for discharging a spray stream of a coating agent,

a bearing unit having a surface shell circumscribing said axis and disposed in said housing and wherein said bearing unit includes a turbine with a turbine wheel to drive said bell-shaped plate,

said bearing unit defining a hole exposed to said bell-shaped plate and defining a needle hole extending radially through said surface shell,

at least one steering air line passing through said bearing unit and defining at least one steering air inlet for supplying the steering air and at least one steering air outlet for discharging steering air for shaping the spray stream, and

said at least one steering air inlet and said at least one steering air outlet being fluidly connected by said hole in said bearing unit extending parallel to said axis of rotation and said needle hole extending from said surface shell of said bearing unit.

18. (New) A rotary atomizer according to Claim 17, wherein said hole in the bearing unit runs at an acute angle to said axis of rotation of said bell-shaped plate.

19. (New) A rotary atomizer according to Claim 18, wherein said steering air line runs at a radial distance from said axis of rotation of said bell-shaped plate, said distance being greater than an outer diameter of said turbine wheel and smaller than an outer diameter of said bearing unit.

20. (New) A rotary atomizer according to Claim 19, wherein said steering air line runs essentially without bends at least over a large part of its length.

21. (New) A rotary atomizer according to Claim 20, wherein said steering air line extends essentially parallel to said axis of rotation of said bell-shaped plate at least over a large part of its length.

22. (New) A rotary atomizer according to Claim 21, wherein said steering air line comprises an essentially constant cross-sectional area at least over a large part of its length.

23. (New) A rotary atomizer according to Claim 22, wherein said steering air line comprises an essentially constant cross-sectional shape at least over a large part of its length.

24. (New) A rotary atomizer according to Claim 23, wherein said steering air line comprises an obstacle-free interior shape at least over a large part of its length.

25. (New) A rotary atomizer according to Claim 24, comprising at least two steering air outlets arranged at a different radial distance from said axis of rotation of said bell-shaped plate for shaping the spray stream.

26. (New) A rotary atomizer according to Claim 25, wherein said at least two steering air lines comprise separate steering air lines for guiding the steering air to different of said steering air outlets.

27. (New) A rotary atomizer according to Claim 26, comprising a first steering air line is spatially separated from said housing and a second steering air line arranged toward contacting said housing.

Applicant: Harry Krumma
Serial No.: 10/624,586

28. (New) A rotary atomizer assembly having a turbine unit for rotating a bell-shaped plate thereby atomizing paint for applying a coating material to work pieces, comprising

a housing having said turbine unit disposed therein;

a first air line disposed through said turbine unit for conveying air through an inner steering air outlet; and

a second air line defined between said turbine unit and said housing for conveying air through an outer steering air outlet, thereby providing two levels of steering air to said bell-shaped plate.